

intended that all combinations of those elements and/or method steps which perform substantially the same function in substantially the same way to achieve the same results are within the scope of the invention. Substitutions of elements from one described embodiment to another are also fully intended and contemplated. It is also to be understood that the drawings are not necessarily drawn to scale but that they are merely conceptual in nature. It is the intention, therefore, to be limited only as indicated by the scope of the claims appended hereto. ^{END A₄}

Page 8 (Amended Sheet), line 1, delete "Claims:" and insert therefor --What is claimed is:--.

IN THE CLAIMS:

Cancel claims 1 to 12, without prejudice.

Add the following new claims:

13. A curtain coater for coating a moving web of paper or board, the curtain coater comprising:

an applicator nozzle positioned above the web to be coated and configured so as to apply coating mix ejected therefrom to a surface of the web in a continuous curtain extending uniformly over a cross-machine width of the web; and

a doctoring means configured to remove a boundary air layer traveling on the surface of the web to be coated and being located upstream in the travel direction of the web of an impingement point of the coating mix curtain on the surface of the web and being located on the same side of the web as the applicator nozzle, the surface of the doctoring means facing the web being curved to support the web.

14. The curtain coater of claim 13, further comprising a gas-injection nozzle located downstream in the travel direction of the web of the applicator nozzle, configured so as to extend over the cross-machine width of the web, and adapted to blow gas toward the coating mix curtain applied to the web from the applicator nozzle.

15. The curtain coater of claim 13, further comprising a suction nozzle extending over the cross-machine width of the web and adapted to said doctoring means so as to remove by suction the boundary air layer traveling on the surface of the web.

16. The curtain coater of claim 14, further comprising a suction nozzle extending over the cross-machine width of the web and adapted to said doctoring means so as to remove by suction the boundary air layer traveling on the surface of the web.

17. The curtain coater of claim 15, wherein an inlet opening of the suction nozzle is on a downstream-directed wall of the doctoring means.

18. The curtain coater of claim 15, wherein an inlet opening of the suction nozzle is on a downstream-directed wall of the doctoring means.

19. The curtain coater of claim 15, wherein an inlet opening of the suction nozzle is on a surface of the doctoring means facing the web.

20. The curtain coater of claim 16, wherein an inlet opening of the suction nozzle is on a surface of the doctoring means facing the web.

21. The curtain coater of claim 13, wherein a distance between the web and the curved surface of the doctoring means is up to 500 μ m.

22. The curtain coater of claim 14, wherein a distance between the web and the curved surface of the doctoring means is up to $500\text{ }\mu\text{m}$.

23. The curtain coater of claim 15, wherein a distance between the web and the curved surface of the doctoring means is up to $500\text{ }\mu\text{m}$.

24. The curtain coater of claim 16, wherein a distance between the web and the curved surface of the doctoring means is up to $500\text{ }\mu\text{m}$.

25. The curtain coater of claim 17, wherein a distance between the web and the curved surface of the doctoring means is up to $500\text{ }\mu\text{m}$.

26. The curtain coater of claim 18, wherein a distance between the web and the curved surface of the doctoring means is up to $500\text{ }\mu\text{m}$.

27. The curtain coater of claim 19, wherein a distance between the web and the curved surface of the doctoring means is up to $500\text{ }\mu\text{m}$.

28. The curtain coater of claim 20, wherein a distance between the web and the curved surface of the doctoring means is up to $500\text{ }\mu\text{m}$.

29. The curtain coater of claim 13, wherein said doctoring means is a doctor bar.

30. The curtain coater of claim 14, wherein said doctoring means is a doctor bar.

31. The curtain coater of claim 15, wherein said doctoring means is a doctor bar.

32. The curtain coater of claim 16, wherein said doctoring means is a doctor bar.
33. The curtain coater of claim 21, wherein said doctoring means is a doctor bar.
34. The curtain coater of claim 22, wherein said doctoring means is a doctor bar.
35. The curtain coater of claim 23, wherein said doctoring means is a doctor bar.
36. The curtain coater of claim 24, wherein said doctoring means is a doctor bar.
37. The curtain coater of claim 13, wherein that a distance along the surface of the web from a downstream end of said doctoring means to the impingement point under said applicator nozzle is less than 50 mm.
38. The curtain coater of claim 14, wherein that a distance along the surface of the web from a downstream end of said doctoring means to the impingement point under said applicator nozzle is less than 50 mm.
39. The curtain coater of claim 15, wherein that a distance along the surface of the web from a downstream end of said doctoring means to the impingement point under said applicator nozzle is less than 50 mm.
40. The curtain coater of claim 16, wherein that a distance along the surface of the web from a downstream end of said doctoring means to the impingement point under said applicator nozzle is less than 50 mm.

41. The curtain coater of claim 17, wherein that a distance along the surface of the web from a downstream end of said doctoring means to the impingement point under said applicator nozzle is less than 50 mm.

42. The curtain coater of claim 18, wherein that a distance along the surface of the web from a downstream end of said doctoring means to the impingement point under said applicator nozzle is less than 50 mm.

43. The curtain coater of claim 19, wherein that a distance along the surface of the web from a downstream end of said doctoring means to the impingement point under said applicator nozzle is less than 50 mm.

44. The curtain coater of claim 20, wherein that a distance along the surface of the web from a downstream end of said doctoring means to the impingement point under said applicator nozzle is less than 50 mm.

45. The curtain coater of claim 21, wherein that a distance along the surface of the web from a downstream end of said doctoring means to the impingement point under said applicator nozzle is less than 50 mm.

46. The curtain coater of claim 29, wherein that a distance along the surface of the web from a downstream end of said doctoring means to the impingement point under said applicator nozzle is less than 50 mm.

47. A curtain-coating method for coating a moving web of paper or board, comprising:

passing the web to be coated to a coater station; and

using an applicator nozzle positioned above the web to apply coating mix ejected therefrom to a surface of the web as a continuous curtain extending uniformly over a cross-machine width of the web;

removing a boundary air layer traveling along with the web from the surface of the web facing the applicator nozzle with a doctoring means located upstream in the travel direction of the web of the applicator nozzle; and

supporting the web with a curved surface of the doctoring means.

48. The curtain-coating method of claim 47, further comprising blowing gas toward the coating mix curtain being applied from the applicator nozzle from a gas-injection nozzle located downstream of the applicator nozzle in the travel direction of the web, the gas-injection nozzle extending over the cross-machine width of the web.

49. The curtain-coating method of claim 47, wherein the boundary air layer traveling on the surface of the web is removed by suction from a suction nozzle adapted to said doctoring means.

50. The curtain-coating method of claim 48, wherein the boundary air layer traveling on the surface of the web is removed by suction from a suction nozzle adapted to said doctoring means.